



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**REQUEST FOR REHEARING**

APPELLANTS:	Yoshimasi Saitoh et al.	OLD DOCKET NO.:	P99,2475
		NEW DOCKET NO.:	09792909-4457
SERIAL NO.:	09/496,656	GROUP ART UNIT:	1772
DATE FILED:	February 3, 2000	EXAMINER:	Sow Fun Hon
INVENTION:	“METHOD OF FABRICATING LIQUID CRYSTAL DISPLAY DEVICE, AND LIQUID CRYSTAL DISPLAY DEVICE”		

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

On November 29, 2007, the Board of Patent Appeals and Interferences issued a Decision on Appeal for the above-identified application. In its Decision on Appeal, the Board affirmed the Examiner's final rejection of Applicants' claims 8-11 and 13.

Appellants submit this Request for Rehearing to the Board within two months of the date of the Board's Decision.

The Commissioner is hereby authorized to charge any deficiency in fees associated with this communication or credit any overpayment to Deposit Account No. 19-3140. A duplicate copy of this sheet is enclosed.

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## REMARKS

In its Decision on Appeal dated November 29, 2007, the Board affirmed the Examiner's final rejection of Applicants' claims 8-11 and 13. Appellants respectfully request rehearing in view of the remarks presented below. Specifically, Appellants respectfully submit that the Board has overlooked that even if one were to categorize claim 8's language relating to exposure energy ratio as a product-by-process claim limitation, it would be wrong to ignore this limitation.

### **Gibbons in view of Park fails to teach or suggest a pre-tilt angle of 3.5 degrees effected by exposure to first polarized UV rays and second polarized UV rays having an exposure energy ratio of 5:1**

Appellants' independent claim 8 claims a liquid crystal display device having a pre-tilt angle greater than or equal to 3.5° effected by exposure to first polarized UV rays and second polarized UV rays. The ratio of exposure energy during the first polarized UV ray exposure to that of the second polarized UV ray exposure is 5:1.

As described in Appellants' specification, Appellants have discovered that the exposure energy ratio is significant in that it effects the pre-tilt angle of the liquid crystal display device. *See*, specification, pages 9-12, Examples 1-3. For example, the specification describes three illustrative examples (Examples 1-3) that have exposure energy ratios of 5:1, 5:1, and 4:1 respectively. *Id.* Example 1 has a pre-tilt angle of 3.5° effected by a ratio of 5:1. Example 2 has a pre-tilt angle of 3.9° effected by a ratio of 5:1. And Example 4 has a pre-tilt angle of 1.5° effected by a ratio of 4:1. *See*, specification, page 12, Table 1.

Even if one were to categorize claim 8's language relating to exposure energy ratio as a product-by-process claim limitation, it would be wrong to ignore this limitation. The structure implied by process steps should be considered when assessing patentability of claims over the cited art, where the process steps impart a distinctive structural characteristic to the device. *In re Garnero*, 412 F.2d 276, 279 (CCPA 1979); MPEP 2113. In this case, the claimed exposure energy ratio of 5:1 imparts a distinctive structural characteristic to the liquid crystal display device. Specifically, the device's pre-tilt angle of 3.5° or greater is effected by the claimed exposure energy ratio of 5:1.

As described previously, *Gibbons* recites a number of examples, however none of the examples have an exposure energy ratio of 5:1. Instead, *Gibbons* only recites examples that use an exposure energy ratio of 4:1 or less. As described above with respect to Appellants' illustrative Example 3, an exposure energy ratio of 4:1 can yield a pre-tilt angle of 1.9°. *See*, specification, page 12, Table 1. Thus, Appellants submit that *Gibbons'* devices having a pre-tilt angle of 1.9° or less.

The Board alleges that it would have been obvious to effect a pre-tilt angle of 3.5° or greater using Appellants' claimed ratio or 5:1 based on the teachings of *Gibbons*. Appellants disagree. *Gibbons* fails to even mention that there is a correlation between exposure energy ratio and pre-tilt angle. For at least this reason, Appellants submit that *Gibbons* provides no suggestion to one having ordinary skill in the art to effect a pre-tilt angle of 3.5° or greater with an energy exposure ratio of 5:1. Further, *Gibbons* fails to teach an exposure energy ratio of 5:1, and only describes exposure energy ratios of 4:1 or lower. Thus, *Gibbons* fails to teach an exposure energy ratio that is high enough to effect a pre-tilt angle of 3.5° or higher, and fails to suggest that its exposure energy ratio may be increased to effect Appellants' claimed pre-tilt angle.

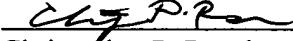
The Board argues *Gibbons* teaches that an exposure system can be tuned "to provide the type of exposure necessary for a complete exposure process." *Decision on Appeal of 11/29/2007*, page 5. Contrary to the Board's assertion, this recited passage fails to suggest that there is a correlation between exposure energy ratio and pre-tilt angle. Instead, the recited passage merely makes a general statement that a system can be tuned to achieve a necessary exposure. Nowhere does *Gibbons* suggest that there is a correlation between exposure energy ratio and pre-tilt angle.

Further, in its Background of the Invention, *Gibbons* makes a general statement that devices may have a pre-tilt angle of 2-15 degrees. *Gibbons* 1:44. However, as discussed above, nowhere does *Gibbons* suggest a device having a pre-tilt angle of 3.5 degrees or greater effected by an energy exposure ratio of 5:1. This is simply not taught nor suggested in *Gibbons*.

Accordingly, *Gibbons* in view of *Park* fails to teach or suggest claims 8-11 and 13.

Therefore, Appellants respectfully request a rehearing and reconsideration of claims 8-11 and 13 on appeal.

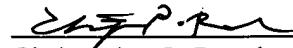
Respectfully Submitted,

  
Christopher P. Rauch (Reg. No. 45,034)  
SONNENSCHEIN NATH & ROSENTHAL LLP  
P.O. Box #061080  
Wacker Drive Station - Sears Tower  
Chicago, IL 60606-1080  
Telephone 312/876-2606  
Customer #26263  
Attorneys for Appellants



CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited as First Class Mail in an envelope addressed to Mail Stop Appeal Brief-Patens, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 31, 2007.

  
Christopher P. Rauch (Reg. No. 45,034)